Angel 2D and 3D Programs

Linc Energy Operations Inc.

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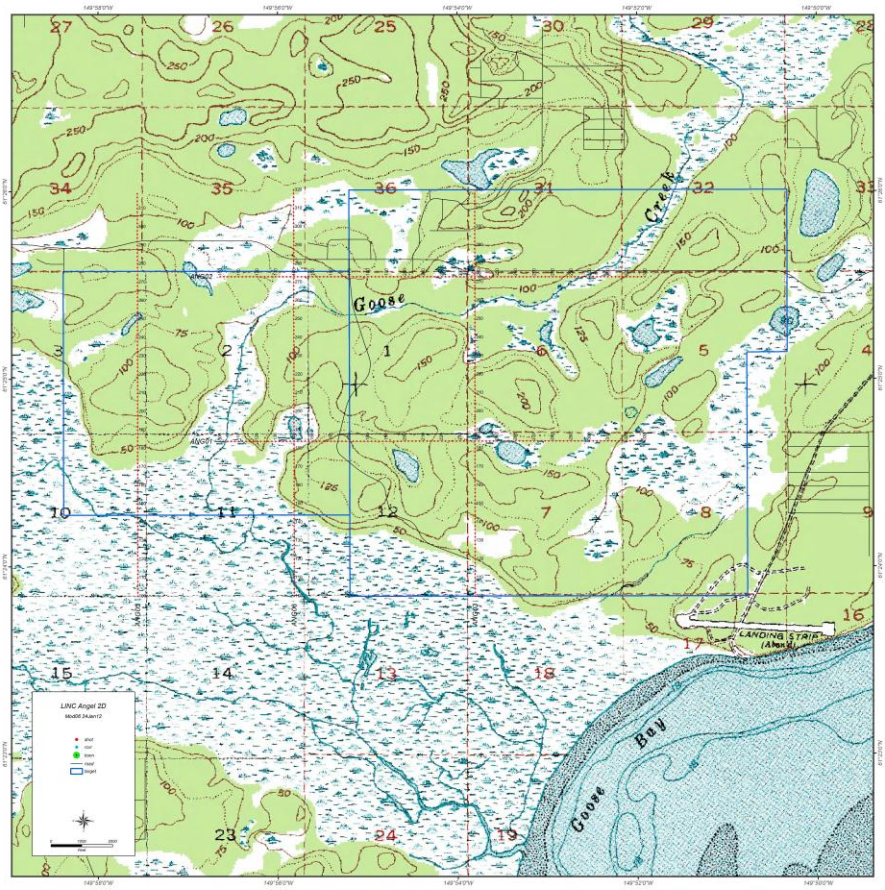
Introduction

Linc Energy has contracted SAExploration to conduct a two dimensional (2D) and three dimensional (3D) seismic acquisition program. The 3D portion is approximately 2.64 sq miles and the 2D line length is 12.70 linear miles; both programs are just north of Goose Bay and west of Knik Arm, Alaska. Permits will be obtained from several private, state and federal agencies. The project will take approximately 30 days to complete. Permits received by March 2012 will allow the mobilization of survey and drilling operations and ensure completion approximately May 2012.

Project Area

The proposed seismic area lies roughly within portions of S015N004W sections 1,2,3,10,11,12,S016N004W sections 34,35,36, S016N003W sections 31,32 and ,S015N003W Sections 5,6,7,8. See map on figure 1.

(Figure 1)



Project Schedule

Field activities would begin in March 2012 and continue through demobilization into May 2012. The projected schedule is provided in Table 1.

Table 1 - Schedule

Activity	Schedule
Mobilization of crew	March 15th
Surveying and Drilling	March-April 2012
Recording	April 2012
Demobilization	May 1 , 2012

Seismic Operations

Access to the seismic program area will be via ground transportation (trucks, snowmachines, etc.) when possible. The seismic program will be conducted with helicopters and heliportable drill rigs for areas that cannot be reached with existing road systems. SAE will use the new nodal technology consisting of an autonomous recording system with sensors approximately the size of a one pound coffee can. See Figure 2. Helicopter support will be used for the transport of personnel, deployment and retrieval of equipment and movement of drill equipment. Crews will mobilize into an area; survey and stake out lines, drill source points; place nodes and record data. Local housing will be utilized for crews.

Survey

SAE will contract the land survey to HAFTA Surveying Company. HAFTA has many years' experience in Alaska operations.
Survey equipment will include:

- Snow machines for access.
- Base stations transmitting corrections on a medium frequency bandwidth.
- Computers and plotters for survey reduction and mapping
- Misc. DGPS survey paraphernalia, compasses, chains, tapes, tribrachs, tripods, etc.

HAFTA surveys will be transported to line locations by helicopter when applicable; otherwise they will utilize the roads in the area for access supported with trucks and snow machines. The survey group will move along pre-mapped points to place survey stakes for receiver and shot locations. By using a MF bandwidth we should be able to eliminate any short falls that would otherwise be present with the use of VHF or UHF bands. Typically these bandwidths (UHF & VHF) are more susceptible to interrupts in corrections when line of sight is lost or, marginal due to vegetation or terrain.

Survey Geometry	
3D - Receiver Line Interval	640 ft.
3D - Receiver Point Interval	80 ft.
3D - Source Line Interval	960 ft.
3D - Source Point Interval	80 ft.
3D - Total Source Lines	9
3D - Total Source Points	1080
3D - Total Receiver Lines	16
3D - Total miles	2.64 mi
2D - Receiver Point Interval	60 ft.
2D - Source Point Interval	120 ft.
2D - Total Source lines	5
2D - Total Source Points	564
2D - Total Receiver Lines	5
2D - Total Miles	12.7 (linear)

Staging Areas

The staging area will include a landing zone (LZ) that will transport crew members from the staging area and into the program area. Personnel will be located at the staging area at all times. Drill equipment, recording equipment, explosives, and fuel (approximately 8,000 gallons) will be stored at the staging area. A staging area will be located at a couple different locations near or within project area to best support the project's logistics. The dimensions of the staging area will be approximately 500 feet by 500 feet. With permission private land in the vicinity of the staging area may also be used as an alternative staging area.

Drilling

SAE will contract Clean Harbors to perform drilling operations. It is estimated that each drill will average 10-15 holes per day. Holes will be loaded with 4.4 pounds of charge, using Osx 8Z with Oseis detonator charge. All holes will be 3" in diameter and drilled to a depth of 25 feet. The shot holes will be backfilled with the drill cuttings to minimize surface disturbance and they will also be packed with two bentonite bags. The bentonite bags do not contain a catalyst nor require mixing;

rather they seal off the shot hole when hydrated. Crew personnel would typically work a 14-hour workday.

Recording

Helicopters, snowmachines, and snowshoes will be used to support transportation to lay seismic lines. Seismic data will be acquired using an autonomous nodal recording system that has been tested and proven to be efficient in terrain and snow cover similar to the program area. The nodes will be charged and the data harvested at base camp upon pickup. Timing for the system will be sync'd off of a GPS time stamp generated by the navigation system.

A helicopter will be used to deliver equipment and personnel along the line(s) as necessary. A Hughes 500 or comparable ship will be used for helicopter air support for recording and survey operations and drilling support will be a Bell UH1B. After the recording has been completed a crew will walk lines to ensure no trash is left behind.

During recording, when a shotpoint is detonated, occasionally a "blowout" or "shotpoint disturbance" may occur. This is not preferred since the source of energy from that shot is diverted in the wrong direction reducing the energy profile for recording. But when a disturbance does occur, this area is then backfilled with any material that was dislodged and thereby returned to its original state. Through proper loading and hole plugging procedures, we are able to minimize the number of surface disturbances created by our operations.

Fuel Storage

Up to 8,000 gallons of jet fuel for aircraft operations may be stored at the staging area in fuel storage areas under our SPCC plan. These mobile fuel storage tanks with 110% secondary containment capacity will be required to support aircraft, and drilling operations. No fuel storage or fueling activities will take place within 100 feet of any water body. Impermeable linings, dikes, or equivalent measures (such as double-walled tanks), will be used for all liquid hydrocarbon storage facilities. Sorbent material in sufficient quantity to handle operation spills will be on hand at all times for use in the event of an oil or fuel spill. All hazardous material containers and fuel drums must be marked with the contents, and permittee's or contractor's name.

Permits

Agency	Required Authorizations
State of Alaska	
DNR, State Historic Preservation Office	• Letter of Concurrence
DNR, DO&G	• Geophysical Use Permit
	• MLUP
MHT	• Land Use Permit
MATANUSKA-SUSITNA BOROUGH	• Land Use Permit
ADF&G	• Title 16 Fish Habitat Permit
	• Special Areas Permit for the Goose Bay State Game Refuge
Privates	• 170 Private permits need to be obtained
UOA	• Land Use Permit
Federal	
U.S. Army Corps of Engineers	• Nationwide Permit 6, Survey Activities

Fish and Wildlife

The pre-plot seismic lines will cross Goose Creek, which have been specified as waters important for anadromous fish Per the Fish and Game resource monitor. Performing operations in the winter season reduces impacts to fish and their habitat.

ADF&G blasting standards (ADF&G no date) require that detonation of explosives within or in close proximity to fish-bearing waters to not exceed instantaneous pressure changes that exceed 2.7 pounds per square inch in the swim bladder of a fish, or produce a peak particle velocity greater than 0.5 inches per second in a fish spawning bed during the early stages of egg incubation. Consultation with ADF&G regarding this project concluded that ADF&G blasting standards may be revised. This project will either adhere to the ADF&G published blasting standards or standards provided by ADF&G through consultation. Explosives will not be detonated within, beneath, or in close proximity to fish bearing waters, in accordance with the requirements of ADF&G blasting standards.

Stream crossings with snow machines will not occur until the stability of the ice is ensured. Crossings will be made from bank to bank in a direction that is normal stream flow and shall be made only at locations with gradual sloping banks.

SAE will obtain the location of known bear dens from ADF&G's Division of Wildlife Conservation prior to commencement of any activities. Occupied dens encountered in the field will be reported to ADF&G, and subsequently avoided by 1/2-mile. All bear encounters or den locations will be logged by survey and will be submitted to the ADF&G at the conclusion of the program. Although encounters with either are unlikely during most of the project, SAE has employed wildness guides to accompany all crews while working on project. Wilderness guides are trained to recognize potential bear dens and procedures will be identified should a bear or bear den be encountered.

Community Relations

SAE will coordinate activities with local user groups including recreational, snow machining, skiing, hunters and subsistence users to prevent unnecessary conflicts. Access to the drill locations will be via slinging the drill into position with the helicopter, with the option of overland foot travel. This type of project should help aid to eliminate any land use conflicts with local users. Notification of project will be posted in local areas prior to beginning of job.

Archeological Sites

SAE has contracted an archaeologist and developed a procedure in compliance with the State Historic Preservation Office (SHPO) to ensure that cultural sites listed in the Alaska Heritage Resources Survey (AHRS) inventory are located that are in the proximity of our operations to ensure appropriate setbacks and avoidance during the scope of our work.

Waste Management & Disposal

All refuse and debris will be disposed of at an approved DEC site. If there is not an approved disposal site at the staging area, refuse and debris will be transported to an approved site in the Matanuska Susitna Borough or Municipality of Anchorage. The ultimate disposal site will be dependent upon the location of seismic operations and most appropriate site. At the completion of seismic operations SAE will conduct a thorough review of the project area to ensure all debris has been picked up and properly disposed.

Alaskan and Regional Hire

SAExploration, Inc. will strive to maintain a high level of Alaskan and regional hire for the program. We will notify the public of our manning requirements with advertisements in the local paper(s).

Health, Safety & Environment

All personnel will be provided, at a minimum, the following project specific orientation: Project Hazards, Permit Stipulations, Mitigation Measures, Emergency Response Plans, and Wildlife/Bear Awareness. SAE personnel and contractors will adhere to the SAE Safety Program Requirements. Prior to operating, Wilderness Guides, assigned to each crew, will conduct a thorough review of the project area to identify any bear dens. Personal protective equipment will be provided to all crews. The types of equipment utilized will be dependent upon the specific task and area deployed for each employee.

Communication and Supervision

The following personnel at SAE can be contacted for information during the Angel 2D & 3D programs are:

Scott Nish	SAE General Manager	(907) 301-2058 (m)
Joe Pagliero	SAE Operations Supervisor	(907) 230-8684 (m)
Sue Simonds	Permits Manager	(907) 331-8140 (m)
Rick Trupp	Business Manager	(907) 280-9442 (m)